

AMENDMENTS TO THE DRAWINGS

FIG. 2 has been amended to include the reference sign for the opposite end 66. A replacement sheet including FIGS. 2 and 3 is attached.

REMARKS

Claims 2-21 are currently pending in the application. Claim 1 was previously cancelled. Applicant respectfully requests reconsideration of the pending claims in view of the following remarks.

Drawings

The Examiner objected to the drawings because they do not include a reference sign for the opposite end 66. Applicant has amended FIG. 2 to include the reference sign for the opposite end 66.

Claim Rejections – 35 U.S.C. § 112

The Examiner rejected Claims 3, 4, 8, 10, 14 and 21 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner stated that the specification does not provide support for the claim limitations related to the “substantial” shape and direction of device structures in these claims.

Applicant respectfully disagrees with this rejection. Claim 3 recites in part a “substantially spherical-shaped” projection. Claim 4 recites in part a “substantially semi-spherical-shaped” projection. Claim 21 recites in part a “substantially spherical-shaped” component. As shown in several of the figures, including FIGS. 2 and 3, the support member 54 is “substantially spherical-shaped” or “substantially semi-spherical-shaped.” Accordingly, at least FIGS. 2 and 3 provide support for the above subject matter of Claims 3, 4, and 21, and no new matter was added in amending these claims to recite “substantially” instead of “generally.” Applicant respectfully requests that the Examiner withdraw these rejections.

Claim 8 recites in part that “the track is oriented in a substantially vertical plane.” As shown in FIG. 6, the linear bearing 60 is “oriented in a substantially vertical plane.” Accordingly, at least FIG. 6 provides support for this subject matter, and no new matter was added in amending Claim 8 to recite “substantially” instead of “generally.” Applicant respectfully requests that the Examiner withdraw this rejection.

Claim 10 recites in part that “the track is oriented in a substantially horizontal plane.” As shown in FIG. 6, the bearing assembly 68 is “oriented in a substantially horizontal plane.” Accordingly, at least FIG. 6 provides support for this subject matter, and no new matter was added in amending Claim 10 to recite “substantially” instead of “generally.” Applicant respectfully requests that the Examiner withdraw this rejection.

Claim 14 recites in part “a carriage adapted to move in a substantially horizontal direction along the track.” As shown in FIGS. 8, 9, and 11, the car 82 is “adapted to move in a substantially horizontal direction” along the bearing assembly 68. Accordingly, at least FIGS. 8, 9, and 11 provide support for this subject matter, and no new matter was added in amending Claim 14 to recite “substantially” instead of “generally.” Applicant respectfully requests that the Examiner withdraw this rejection.

Claim Rejections – 35 U.S.C. § 102

The Examiner rejected Claims 2, 5-7, 9, and 11-20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,442,777 (“Pauli”).

Pauli does not disclose the subject matter of independent claim 2. More specifically, Pauli does not disclose an upper body positioning device connectable to a couch of a radiation therapy treatment system, the upper body positioning device comprising at least the following elements:

- (1) a projection extending from one end of the frame, the projection defining a pivot point;
- (2) a first assembly connectable to a second end of the frame, the first assembly including a vertically-oriented bearing having a first end and a second end, the first end extending through an opening in the frame, the second end of the frame configured to move along the vertically-oriented bearing to provide a first range of motion of the frame relative to the couch about the pivot point; and
- (3) a second assembly including a horizontally-oriented bearing, the second end of the vertically-oriented bearing configured to move along the horizontally-oriented bearing to provide a second range of motion of the frame relative to the couch about the pivot point.

Rather, Pauli discloses a patient support device for a diagnostic radiography system including a support plate 7 with a support portion 14 for supporting the patient's torso and extremities and a support element 15 for supporting the patient's head. The support element 15 can be displaced relative to the support portion 14 using an adjusting mechanism 16.

The adjusting mechanism 16 includes a support element 15, a sleeve 18, a joint 19, and a bar 17. The bar 17 is permanently attached to the support plate 7 and is received by the sleeve 18 so that the position of the sleeve 18 can be adjusted along the bar 17. The joint 19 pivotally attaches the sleeve 18 to the support element 15 so that the support element 15 can be pivoted about an axis A (shown in FIG. 2) extending transversely to the system axis z

(shown in FIG. 1). This arrangement forms a “push-pivot joint” for adjusting the inclination of the support element 15 relative to the support portion 14 of the support plate 7.

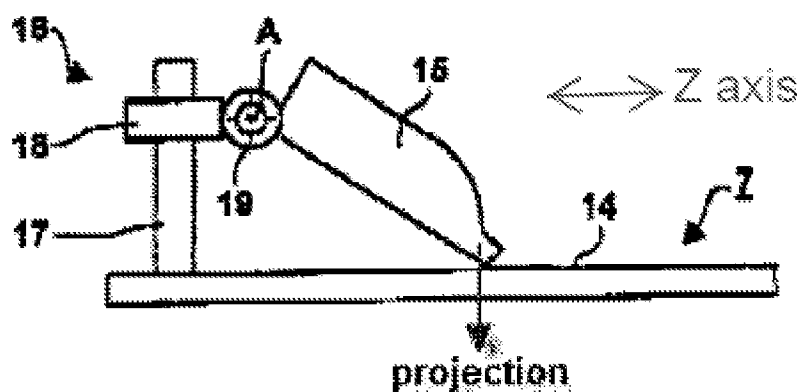
The Examiner has identified the couch in Pauli as including components 7, 14, the frame in Pauli as including components 15, 18, 19, the vertically-oriented bearing in Pauli as component 17, and the horizontally-oriented bearing in Pauli as component 8. The Examiner has also identified the projection in Pauli as the end of the support element 15 opposite from joint 19 as shown in the marked-up version of FIG. 2 included in the Office action and included below.

U.S. Patent

Sep. 3, 2002

Sheet 2 of 2

US 6,442,777 B1



15

A

FIG 2

The Examiner fails to identify in Pauli the pivot point defined by the projection. Applicant assumes that the Examiner considers the pivot point to be the point of contact between the projection as shown above and the support plate 14.

The frame (15, 18, 19) of Pauli does not include a “second end . . . configured to move along the vertically-oriented bearing to provide a first range of motion of the frame relative to the couch about the pivot point.” The frame (15, 18, 19) does not move relative to the couch **about** the pivot point. Instead, the pivot point moves translationally **along** the couch (7, 14) as the frame (15, 18, 19) is raised or lowered along the vertically-oriented bearing (17) to adjust the angle of inclination of the frame (15, 18, 19) relative to the couch (7, 14).

Additionally, the vertically-oriented bearing (17) of Pauli is not “configured to move along the horizontally-oriented bearing to provide a second range of motion of the frame relative to the

couch about the pivot point.” The vertically-oriented bearing (17) does not move **along** the horizontally-oriented bearing (8) relative to the couch (7, 14) **about** the pivot point. The vertically-oriented bearing (17) is not connected to the horizontally-oriented bearing (8) and therefore cannot move **along** the horizontally-oriented bearing (8). Furthermore, the vertically-oriented bearing (17) does not move relative to the couch (7, 14) **about** the pivot point. The vertically-oriented bearing (17) is attached to the couch (7, 14) and therefore cannot move relative to the couch (7, 14).

For the sake of argument only, if the Examiner asserts that axis A is the pivot point, then there is no projection extending from the support element 15 that provides the claimed range of motions of the support element 15 relative to the support portion 14 as specified in Claim 2.

For at least these reasons, Pauli does not disclose the subject matter of Claim 2. Accordingly, independent Claim 2 is allowable. Claims 5-7, 9, and 11-15 depend from Claim 2 and are allowable for at least the reasons Claim 2 is allowable. Claims 5-7, 9, and 11-15 may include additional reasons for patentability not specifically discussed herein.

Pauli does not disclose the subject matter of independent Claim 16. More specifically, Pauli does not disclose a positioning device comprising at least the following elements:

- (1) a first assembly adapted to move the body part about the first axis;
- (2) a second assembly adapted to move the body part about a second axis oriented perpendicular with respect to the first axis; and
- (3) a third assembly adapted to move the body part about a third axis oriented perpendicular with respect to the first axis and the second axis.

The Examiner has identified the frame in Pauli as including components 15, 18, 19, the first assembly in Pauli as including components 17, 18, the second assembly of Pauli as including components 7, 8, 10, 14, and the third assembly of Pauli as component 19.

The patient support disclosed by Pauli does not provide for the movement of a body part supported by the frame about a second axis oriented perpendicular with respect to the first axis or for the movement of the body part about a third axis oriented perpendicular with respect to the first axis and the second axis. The patient support disclosed by Pauli can move a body part (the head) supported by the frame (15, 18, 19) **about** a first axis A, as shown in FIG. 2. Raising or lowering the first assembly (17, 18), moves the head about the axis A. The axis A can only have two other axes that are oriented perpendicular to axis A and to each other as required by Claim 16. One of these two possible axes must be system axis z. As shown in FIG. 1, the system axis z is oriented perpendicular to the axis A. The frame (15, 18, 19) is movable with

the second assembly (7, 8, 10, 14) **along** the system axis z, but is not movable **about** the system axis z.

For at least these reasons, Pauli does not disclose the subject matter of Claim 16. Accordingly, independent Claim 16 is allowable. Claims 17 and 18 depend from Claim 16 and are allowable for at least the reasons Claim 16 is allowable. Claims 17 and 18 may include additional reasons for patentability not specifically discussed herein.

Pauli does not disclose the subject matter of independent Claim 19. More specifically, Pauli does not disclose a positioning device connectable to a couch of a radiation therapy treatment system, the positioning device comprising at least the following elements:

- (1) the component and the first assembly configured to provide pitch movement,
- (2) the component and the second assembly configured to provide yaw movement, and
- (3) the component and the third assembly configured to provide roll movement of the frame relative to the couch about the pivot point.

The Examiner has identified the couch in Pauli as including components 7, 14, the frame in Pauli as including components 15, 18, 19, the first assembly in Pauli as including components 17, 18, the second assembly of Pauli as including components 7, 8, 10, 14, and the third assembly of Pauli as component 19. The Examiner has also identified the component in Pauli as the end of the support element 15 opposite from joint 19 as shown as the projection in the marked-up version of FIG. 2 included in the Office action and included above. The Examiner fails to identify in Pauli the pivot point defined by the component. Applicant assumes that the Examiner considers the pivot point to be the point of contact between the component as shown above and the support plate 14.

Pitch, roll, and yaw all describe rotational movement about an axis. The assemblies identified by the Examiner as disclosed by Pauli do not provide for pitch, roll, and yaw movements of the frame relative to the couch about the pivot point. The frame (15, 18, 19) is movable with the couch (7, 14) **along** the system axis z, but is not movable **about** the system axis z. Therefore, the component and the second assembly (7, 8, 10, 14) identified by the Examiner cannot be configured to provide yaw movement of the frame (15, 18, 19) relative to the couch (7, 14) about the pivot point.

For at least these reasons, Pauli does not disclose the subject matter of Claim 19. Accordingly, independent Claim 19 is allowable. Claim 20 depends from Claim 19 and is allowable for at least the reasons Claim 19 is allowable. Claim 20 may include additional reasons for patentability not specifically discussed herein.

Claim Rejections – 35 U.S.C. § 103

The Examiner rejected Claims 3, 4, 8, 10, and 21 under 35 U.S.C. § 103(a) as being unpatentable over Pauli.

Claims 3, 4, 8, and 10 depend from Claim 2 and are allowable for at least the reasons Claim 2 is allowable. Claims 3, 4, 8, and 10 may include additional reasons for patentability not specifically discussed herein.

Claim 21 depends from Claim 20 and is allowable for at least the reasons Claim 20 is allowable. Claim 20 may include additional reasons for patentability not specifically discussed herein.

CONCLUSION

In view of the foregoing, entry of this Amendment and allowance of the pending claims are respectfully requested. The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,

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